DaimlerChrysler AG

Patent claims

1. A method for detecting an object (1) in a motor vehicle environment using a detection means scanning the environment at predetermined angular increments $\varphi i+1-\varphi i$ $(i=1,2,...,N)$,
characterized
in that, when sensing a reflection signal (6 to 11) of the object (1) at an angle φi, the angular increments are refined in the angular range between the adjacent angles $\varphi i-1$ and $\varphi i+1$ as a function of the signal propagation times ti-1, ti and ti+1 of the reflection signals (6 to 11) sensed at the angles $\varphi i-1$, φi and $\varphi i+1$.

2. The method as claimed in claim 1,
characterized
in that at least one angle φz $(z=1,2,...,N)$ additionally to be sensed is introduced in the angular range between the angles $\varphi i-1$ and φi or φi and $\varphi i+1$ if the absolute propagation time difference between the signal propagation times ti and ti-1 or ti and ti+1 of the reflection signals (6 to 11) exceeds a predetermined threshold value.

3. The method as claimed in claim 2,
characterized
in that the method is continued until reliable detection of the object is ensured.

4. The method as claimed in claim 2,
characterized
in that the angle φz additionally to be sensed is determined in an interval nesting method.

5. The method as claimed in claim 2,

characterized
in that the angle φz additionally to be sensed is determined in an iteration method with a suitable weighting.

6. The method as claimed in claim 2,
characterized
in that the scanning takes place substantially horizontally.

7. The method as claimed in claim 2,
characterized
in that the scanning takes place substantially vertically.

8. The method as claimed in claim 2,
characterized
in that the scanning takes place at a predetermined angle of inclination.

9. A device for detecting an object (1) in a motor vehicle environment for the purpose of carrying out the method as claimed in one of the preceding claims,
characterized
in that the angular increments can be set in the angular range between adjacent angles φi-1 and φi as a function of the signal propagation times ti-1 and ti of the reflection signals (6 to 11) sensed at the angles φi-1 and φi.